

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 503958/142	FOR FURTHER ACTION	see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.
International application No. PCT/NZ03/00111	International filing date (<i>day/month/year</i>) 4 June 2003	(Earliest) Priority Date (<i>day/month/year</i>) 4 June 2002
Applicant AUCKLAND UNISERVICES LIMITED et al		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of **4** sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing:

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ Certain claims were found unsearchable (See Box I).

3. ☐ Unity of invention is lacking (See Box II).

4. With regard to the **title**, ☒ the text is approved as submitted by the applicant.
☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**, ☒ the text is approved as submitted by the applicant
☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☐ as suggested by the applicant.
☐ because the applicant failed to suggest a figure
☐ because this figure better characterizes the invention

☒ None of the figures

INTERNATIONAL SEARCH REPORT

International application No.

PCT/NZ03/00111

A. CLASSIFICATION OF SUBJECT MATTER

Int. Cl. ⁷: C07K19/00, C07K14/00, C07K 014/315, C07K 016/12; A61K 035/74, A61K39/00, A61K 039/09, A61K39/39; C12N 001/20, C12N15/31; C07H 019/00; C12Q 001/68

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Angis blast, dgene blast on SEQ ID No 1; keyword: smez

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	Fraser, J.D. <i>et al</i> : Journal of Immunology, (1 September 2002) 169 (5) 2561-9. "The bacterial superantigen streptococcal mitogenic exotoxin Z is the major immunoactive agent of Streptococcus pyogenes".	1 to 24
A	Proft, T. <i>et al</i> : Journal of Experimental Medicine, (15 May 2000) 191 (10) 1765-76. "The Streptococcal Superantigen SMEZ Exhibits Wide Allelic Variation, Mosaic Structure, and Significant Antigenic Variation".	1 to 24

☒ Further documents are listed in the continuation of Box C

☒ See patent family annex

* Special categories of cited documents:	
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E" earlier application or patent but published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search
12 September 2003

Date of mailing of the international search report

11 NOV 2003

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/NZ03/00111

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	Arcus, V.L. <i>et al</i> : Journal of Molecular Biology, (26 May 2000) 299 (1) 157-68. "Conservation and Variation in Superantigen Structure and Activity Highlighted by the Three dimensional Structures of Two New Superantigens from <i>Streptococcus pyogenes</i> ".	1 to 24
A	Proft, T. <i>et al</i> : Journal of Experimental Medicine, (4 January 1999) 189 (1) 89-101. "Identification and Characterisation of Novel Superantigens from <i>Streptococcus pyogenes</i> ".	1 to 24
A	WO 02/45739 A1 (Auckland Uniservices Limited), 13 June 2002. The whole document.	1 to 24

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/NZ03/00111

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report	Patent Family Member
WO 02/45739 A1	
END OF ANNEX	

INTERNATIONAL SEARCH REPORT

International application No.

PCT/NZ01/00267

A. CLASSIFICATION OF SUBJECT MATTERInt. Cl. ⁷: A61K 39/00, 39/39; C07K 19/00, 14/00, 14/315; C12N 15/31; A61P 37/02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

medline, wpids, ca, biosis, biotechabs
superantigen, fusion, chimeric, t(w)cell**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 98/26747 (TERMAN D. S.), 25 June 1998 See abstract; pages 34 and 36	1-6, 10-22, 26-31, 36-38
Y		7, 32
Y	WO 98/24910 (REGENTS OF THE UNIVERSITY OF MINNESOTA), 11 June 1998 See abstract; Figure 7	7, 32

☒ Further documents are listed in the continuation of Box C ☒ See patent family annex

* Special categories of cited documents:

"A" Document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search
4 February 2002

Date of mailing of the international search report, 14 FEB 2002

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/NZ01/00267

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	PROFT T and FRASER J, "Superantigens: Just Like Peptides Only Different" Journal of Experimental Medicine (1998), vol 187 (6), pages 819-821	
A	US 5,968,514 (JOHNSON <i>et al.</i>), 19 October 1999 See column 5 lines 54-62	